



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,390	01/16/2002	Donald L. Yates	MTI-31269	6193
31870	7590	10/22/2003	EXAMINER	
WHYTE HIRSCHBOECK DUDEK S.C.			NGUYEN, CUONG QUANG	
111 E. WISCONSIN AVE.			ART UNIT	
SUITE 2100			PAPER NUMBER	
MILWAUKEE, WI 53202			2811	

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,390

Applicant(s)

YATES ET AL.

Examiner

Cuong Q Nguyen

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-203 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☒ Claim(s) 66-88, 151-156, 158, 187, 190-192 and 198 is/are allowed.
- 6) ☒ Claim(s) 160, 168-171, 177-179, 185, 186, 189 and 197 is/are rejected.
- 7) ☒ Claim(s) 161-163, 172, 173, 180 and 181 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

Continuation of Disposition of Claims: Claims withdrawn from consideration are 130-150,157,159,164-167,174-176,182-184,188,193-196 and 199-203.

DETAILED ACTION

Election/Restriction

1. Applicant's election with traverse of Embodiment I, claims 66-88, 151-156, 158, 160-163, 168-173, 177-181, 185-187, 189-192, 197, and 198 in Paper No. 7 is acknowledged.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract is too long and it should be direct to the device not a method to make the device.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 160, 168, 169, 170, 171, 177-179, 185, 186, 189, and 197 are rejected under 35 U.S.C. 102(b) as being anticipated by Nguyen et al. (US 5,753,948).

Regarding claims 160, 168, 170, 171, 178, 189, 197, Nguyen et al. discloses a DRAM semiconductor circuit including a capacitor structure formed over a substrate (1), wherein the capacitor comprising: a lower capacitor plate including a conductive layer (28) overlying a texturizing layer (comprising layers 22 and 23), wherein the texturizing layer comprises an order array of nanostructures (25, a two dimensional structure) of substantially uniform dimension; a dielectric layer (29) overlying the lower capacitor plate; and an upper capacitor plate (30) overlying the dielectric layer. See Nguyen et al.'s Fig.3B and Fig.4.

Art Unit: 2811

Regarding claims 169, 177, as shown in Nguyen et al.'s Fig.3B, the texturizing layer comprises a periodic network of surface structures (25) having a substantially uniform height.

Regarding claims 179, 185, 186, it is noted that Nguyen et al.'s device is a DRAM memory device and the capacitor contact to silicon substrate (col.3 lines 35-42). So, it is inherent that Nguyen et al.'s DRAM memory device including a array of plurality memory cells and each cell comprises a capacitor as shown in Fig.4 and a FET transistor wherein the capacitor electrical contact an active area (one of source/drain regions of the FET transistor) within a semiconductor substrate. See reference US 5,851,898 which was cited for supporting the inherency.

Allowable Subject Matter

4. Claims 161-163, 172-173, 180-181 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. Claims 66-88, 151-156, 158, 187, 190-192, and 198 are allowed.
6. The following is an examiner's statement of reasons for allowance: Nguyen et al. appears to be the closest prior art reference. However, this reference fails to teach the following: the texturizing layer comprising nanostructures comprising a silicon-
comprising ceramic (claims 66-88, 151-156, 158); the texturizing layer comprises a polymeric material (claims 161-163, 172-173, 180-181). Prior art of record fails to teach

Art Unit: 2811

or suggest to incorporate these limitations into Nguyen et al. to arrive at the claimed device.

The process steps in claim 179 are taken to be a product by process limitation, it is the patentability of the claimed product and not of recited process steps which must be established. Therefore, when the prior art discloses a product which reasonably appears to be identical with or only slightly different than the product claimed in a product-by process claim, a rejection based on sections 102 or 103 is fair. A product by process claim directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See In re Fessman, 180 USPQ 324,326(CCPA 1974); In re Marosi et al., 218 USPQ 289,292 (Fed. Cir. 1983); and particularly In re Thorpe, 227 USPQ 964,966 (Fed. Cir. 1985), all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the process steps, which must be determined in a "product by process " claim, and not the patentability of the process. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claim in "product by process" claim or not.

Conclusion

7. Papers related to this application may be submitted to Technology center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the TC 2800 Fax center located in Crystal Plaza 4, room 4-C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15,

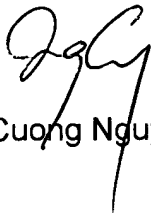
Art Unit: 2811

1989). The Group 2811 Fax Center number is (703) 872-9306. The Group 2811 Fax Center is to be used only for papers related to Group 2811 applications.

8. Any inquiry concerning this communication or any earlier communication from the Examiner should be directed to CUONG Q NGUYEN whose telephone number is (703) 308-1293. The Examiner is in the Office generally between the hours of 6:30 AM to 5:00 PM (Eastern Standard Time) Monday through Thursday.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Eddie Lee who can be reached on (703) 308-1690. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

10. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center Receptionists whose telephone number is 308-0956.



Cuong Nguyen

Primary examiner

10/9/03